

2-1 C... - Retec... - 2002...  
**IC2100 COMMERCIAL DATABASE SEARCH REQUEST**

7/17/26

Focus Search Only  
☒ RUSH - SPE signature required: [Signature]

Staff Use Only  
Access DB# 80208  
Log Number 71726

Business Methods Case: 705/ 36 7B21  
Write in 705 subclass(es) to search required files for 705 cases or cases cross referenced in 705.

Requester's Full Name: ELAINE GORT Examiner #: 77459 Date: \_\_\_\_\_  
Art Unit: 3627 Phone Number 308-6391 Serial Number: 7426756  
Bldg & Room #: CPK2-SA06 Results Format Preferred: PAPER ☒ DISK ☐ E-MAIL ☐

If more than one search is submitted, please prioritize searches in order of need.

Provide the PALM Bid page or the following:  
Title of Invention: \_\_\_\_\_

Inventors (provide full names): \_\_\_\_\_

Earliest Priority Filing Date: 10/26/99

Requested attachments:

- If possible, provide the cover sheet, the IDS, examples, or relevant citations, authors, etc, if known.
- Please attach copies of the parts of this case that help explain or are most pertinent to this search. Examples are: (abstract) background, summary, (claim(s) [not all of the claims]).

The claimed or apparent novelty of the invention is: See attached. See particularly claims:

Novelty is ~ Creating a portfolio index based on individual portfolio data, asset class data, portfolio tracking data.

This search should focus on:  
(Also include keywords or synonyms)

Search focus on Find a reference 11-15-2002 A98: stock + bond funds  
that shows a analysis 12-25-2002 A98: 19  
Portfolio prices, corresponding dates, CUSIP number, SIC code,  
"Lipper Mutual Fund Industry Average" performance level and "MORNINGSTAR  
RATING SYSTEM" which produce some kind of index  
for comparison.

Focus search: Info on any Solomon Brothers Bond Index  
See Pgs 8 + 24 attached - Thanks EJ  
Special Instructions or Other Comments

SIMILAR TO WEBS - World Equity Benchmark  
Also General info on how WEBS is Shares sold on NY Stock Exch

STAFF USE ONLY	Type of Search	Vendors and cost where applicable
Searcher: <u>Bode Akinola</u>	NA Sequence (#) _____	STN _____
Searcher Phone #: <u>308-6150</u>	AA Sequence (#) _____	Dialog <u>\$178</u>
Searcher Location: <u>MS. 8A01</u>	Structure (#) _____	Questel/Orbit _____
Date Searcher Picked Up: _____	Bibliographic _____	Dr. Link _____
Date Completed: _____	Litigation _____	Lexis/Nexis _____
Searcher Prep & Review Time: <u>20 min</u>	Fulltext _____	Sequence Systems _____
Clerical Prep Time: _____	Patent Family _____	WWW/Internet <input checked="" type="checkbox"/>
Online Time: <u>30 min</u>	Other _____	Other (specify) _____

COMPLETE 705 TEMPLATE SEARCH REQUESTED

RUSH!

**EIC2100 COMMERCIAL DATABASE SEARCH REQUEST**

11/12/06

Focus SEARCH ONLY  
☒ RUSH - SPE signature required:

*[Signature]*

Staff Use Only

Access DB#

~~808-6391~~

Log Number

11726

Business Methods Case: 705/ 36 7B21

Write in 705 subclass(es) to search required files for 705 cases or cases cross referenced in 705.

Requester's Full Name: ELAINE GORT

Examiner #: 77459

Date: \_\_\_\_\_

Art Unit: 3627

Phone Number 308-6391

Serial Number: 7/426756

Bldg & Room #: CPK2-SA06

Results Format Preferred: PAPER ☒ DISK ☐ E-MAIL ☐

If more than one search is submitted, please prioritize searches in order of need.

Provide the PALM Bib page or the following:

Title of Invention: \_\_\_\_\_

Inventors (provide full names): \_\_\_\_\_

Earliest Priority Filing Date: 10/26/99

Requested attachments:

- If possible, provide the cover sheet, the IDS, examples, or relevant citations, authors, etc, if known.
- Please attach copies of the parts of this case that help explain or are most pertinent to this search. Examples are: abstract, background, summary, claim(s) [not all of the claims].

The claimed or apparent novelty of the invention is: See attached. See particularly claims:

Novelty is ~ creating a portfolio index based on individual portfolio data, asset class data, portfolio tracking data.

This search should focus on:

(Also include keywords or synonyms)

Search focus on ~ Find a reference that shows a analysis of stock + bond funds  
11-15-2002 A08:19  
11-25-2002 A08:19  
portfolio prices, corresponding dates, CUSIP number, SIC code,  
"Lipper Mutual Fund Industry Average" performance level and "MORNINGSTAR  
RATING SYSTEM" which produce some kind of index  
for comparison.

Focus search: Info on any Solomon Brothers Bond Index  
See Pgs 8 + 24 attached - Thanks EJ

Special Instructions or Other Comments

SIMILAR TO WEBS - World Equity Benchmark

ALSO General info on how WEBS is Shares sold on NY Stock Exch

308-6391

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**Salomon Brothers**

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(212) 783-6726  
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(212) 783-6032  
Marie Nugent  
Harrison Silver  
Armando Lacayo

**Introducing the Salomon  
Brothers World Equity  
Index**

**Equity Index Group Publications**

*1993 Global Markets Review*, Thomas Nadbielny, et al., Salomon Brothers Inc, February 1994.

*1992 Global Markets Review*, Thomas Nadbielny, et al., Salomon Brothers Inc, April 1993.

*Global Synthetic Equity: Comparing the Benchmarks*, Thomas Nadbielny, Salomon Brothers Inc, December 1991.

*Foreign Withholding Taxes — A Primer for Equity Portfolio Investors*, Kumar Doraiswami, Thomas S. Nadbielny, CFA, and Nicole R. Tanguy, Salomon Brothers Inc, December 1990.

*Pension Sponsors' Review* (Quarterly).

*Salomon Brothers World Equity Indexes* (Monthly).

**Other Salomon Brothers Index-Related Publications**

*Introducing the Salomon Brothers New Large Pension Fund Baseline Bond Index,<sup>SM</sup>* Gregory Curran and Carol Sabia, Salomon Brothers Inc, May 1994.

*Introducing the New Salomon Brothers Eurodollar Bond Index*, Rosario Benavides, et al., Salomon Brothers Inc, January 1994.

*Sources of Index Data*, Global Index Group, Salomon Brothers Inc, January 1994.

*Announcing a New Standard for Exchange Rates Used in Index Calculations*, Carol Sabia and Michael Sullivan, Salomon Brothers Inc, December 1993.

*Expanded Industry Sectors*, Gregory D. Curran, Salomon Brothers Inc, December 1993.

*The Salomon Brothers Convertible Securities Index*, Anand S. Iyer, CFA, Peter Nakkash and Harrison Silver, Salomon Brothers Inc, November 1993.

*Salomon Brothers World Money Market Index: Definition and Methodology, et al.*, Sivan Mahadevan, Carol Sabia and Theresa Veres, Salomon Brothers Inc, May 1993.

*Introducing Austria: An Addition to the Salomon Brothers World Government Bond Index,<sup>SM</sup>* Carol Sabia, Salomon Brothers Inc, March 1993.

*Brady Bond Index Update*, Vincent J. Palermo and Costas C. Hamakiotes, Salomon Brothers Inc, January 1993.

*Salomon Brothers World Government Bond Index: Expansion and Redefinition, et al.*, Thomas E. Klaffky, et al., Salomon Brothers Inc, July 1992.

*The Salomon Brothers Brady Bond Index: Impact of Recent Events and Return Prospects*, Costas C. Hamakiotes, Salomon Brothers Inc, March 1992.

*Introducing the Salomon Brothers Brady Bond Index: A Performance Benchmark for Developing Country Bonds*, Thomas E. Klaffky, et al., Salomon Brothers Inc, September 1991.

Best →

Fourth-generation stock market indexes represent a refinement over third-generation stock market indexes. In addition to eliminating bias caused by issue selection by including **all** issues from the target univers fourth-generation indexes weight issues according to the proportion of th shares that are realistically **ownable** in the marketplace — that is, issues are **float capitalization weighted** rather than simply **total capitalization weighted**. Relative to a fourth-generation index, investors are not measured against shares that they realistically cannot own. Thus, fourth-generation indexes take the concept of measuring the market portfolio one step further; they measure the **available market portfolio** (for a further discussion, see "Total versus Available Share Capital," page 4).

Figure 6 highlights some of the general differences, according to the "Characteristics of a Good Benchmark" section of this report, between the four generations of stock market indexes.

Figure 6. Generational Index Characteristic Rating

Characteristics	First Generation	Second Generation	Third Generation	Fourth Generation
Relevance	Good	Very Good	Very Good	Excellent
Comprehensiveness	Poor	Good	Very Good	Excellent
Replicability	Good	Excellent	Very Good	Very Good
Stability	Excellent	Excellent	Excellent	Excellent
Barriers to Entry	Excellent	Excellent	Very Good	Excellent
Other Expenses	Good	Excellent	Good	Good
Selection Criteria	Poor	Good	Excellent	Excellent

#### THE SALOMON BROTHERS FAMILY OF INDEXES

Dramatic growth in cross-border flows of investment capital has increased the need for accurate and timely financial data on the scope, size, characteristics, and performance of the world's financial markets. To meet this need Salomon Brothers compiles a family of financial market indexes that incorporates a consistent philosophy and construction methodology. Wherever possible, the Salomon Brothers Indexes utilize consistent pricing and foreign exchange rates. Practitioners using the Salomon Brothers indexes to directly compare country and regional performances of different asset classes and subcategories know that the only difference in the relative performance of different markets and asset classes is due to the markets and asset classes themselves and not to different construction methodologies of the indexes being compared. The Salomon Brothers World Equity Index is one index in a family of benchmarks that includes:

- Salomon Brothers World Government Bond Index<sup>SM</sup>
- Salomon Brothers Broad Investment-Grade Bond Index<sup>TM</sup>
- Salomon Brothers High-Yield Market Indexes
- Salomon Brothers Brady Bond Index
- Salomon Brothers Eurodollar Bond Index<sup>SM</sup>
- Salomon Brothers Large Pension Fund Baseline Bond Index<sup>TM</sup>
- Salomon Brothers World Money Market Index<sup>SM</sup>
- Salomon Brothers "Convertible" Securities Index
- Salomon Brothers Core  $\oplus$  5 Index<sup>SM</sup>
- Salomon Brothers Core  $\oplus$  3 Index<sup>SM</sup>
- Salomon Brothers Targeted Index Matrix<sup>SM</sup>
- Salomon Brothers World Equity GDP-Weighted Index

All these

Examiner Elaine:

Please find attached your search on Salomon brothers bond indexes.

Please let me know if you like for me to try a refocused search with a different strategy or additional terms.

Bode Akintola

Please take a few minutes to fill the attached Green feedback form to the EIC.

Set	Items	Description
S1	1308	SALOMON
S2	145202	INDEX? OR INDICES
S3	13	S2(2S)S1
S4	3	S3(S)BOND? ?

?show files

File 349:PCT FULLTEXT 1979-2002/UB=20021114,UT=20021107  
(c) 2002 WIPO/Univentio

File 348:EUROPEAN PATENTS 1978-2002/Nov W02  
(c) 2002 European Patent Office

4/3,K/1 (Item 1 from file: 349)  
DIALOG(R) File 349:PCT FULLTEXT  
(c) 2002 WIPO/Univentio. All rts. reserv.

00867354 \*\*Image available\*\*

SYSTEM FOR CARD ACTIVITY-BASED MORTGAGE CREDITING  
SYSTEME DE PRETS HYPOTHECAIRES DEPENDANT DES OPERATIONS DE CARTE DE CREDIT  
Patent Applicant/Inventor:

CARRAGHER Philip, 904 Lookout Court, Windsor, CO 80550, US, US  
(Residence), US (Nationality)

WEBSTER Steven Earl, 269 Newfound Harbor Drive, Merrit Island, FL 32952,  
US, US (Residence), US (Nationality)

Legal Representative:

TRZYNA Peter K (agent), P.O. Box 7131, Chicago, IL 60680-7131, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200201479 A1 20020103 (WO 0201479)

Application: WO 2000US35341 20001222 (PCT/WO US0035341)

Priority Application: US 2000604696 20000626; US 2000669196 20000925

Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ

DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ

LC LK LR LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI

SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR

(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English

Fulltext Word Count: 23099

Fulltext Availability:

Claims

Claim

... of need for Gateway products can motivate the consumer to switch cards. 1 0 The Salomon Smith Barney MasterCard FMA Card awareis one point for each dollar spent. The points are...one with a higher perceived value. Another program rewards the consumer with U.S. Savings Bonds . This card markets to consumers wanting to save for college. Points accumulate at the rate...

...for every 2500 points the primary cardholder gets a \$25 Series EE U.S. Savings Bond . One

5

advantage of using the bonds for college education is that the eamings may be exempt from not only state and...

...federal taxes as well. The shortcomings here are that the rewards are limited to savings bonds , and even though the bonds are targeted for college expenses, there are instances that may lead to wastefulness, real and...

...for any purpose, even wasteful expenditures. Second, the points, prior to the issuance of the bond , do not earn interest, depriving the consumer of potential earnings. Lastly, the bonds can only be redeemed after six months of the issue date, and even though they...

...the consumer may have a better use for the funds. Another shortcoming is that the bonds can only be issued to the primary cardholder, and the federal tax break only applies...

...and only for the cardholder or the cardholder's spouse or any dependent, and the bond must be redeemed in the same calendar year that the tuition and fees are paid...

...have a need for secondary education for themselves or their immediate family; and because the bonds reach maturity in 18 years, 0 the full value of the bonds may not be realized when they are needed or they may never be needed at...



...the appearance of wastefulness. Finally, a family may have a child, and participate in this **bond** reward program for four or five years before assuming that any more **bonds** will not have the value desired. Any wastefulness, perceived or otherwise, will motivate the consumer...

4/3,K/2 (Item 2 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
(c) 2002 WIPO/Univentio. All rts. reserv.

00757134 \*\*Image available\*\*  
METHOD FOR ILLUSTRATING REPLACEMENT OF A BENEFIT PLAN NOT VIABLE IN THE JURIDICTION  
PROCEDE ILLUSTRANT LE REMPLACEMENT D'UN PROGRAMME DE PREVOYANCE NON VALABLE AU LIEU DE JURIDICTION

Patent Applicant/Inventor:

PARSONS David, 12155 Wexford Overlook, Roswell, GA 30075, US, US  
(Residence), US (Nationality)

Legal Representative:

TRZYNA Peter K, P.O. Box 7131, Chicago, IL 60680-7131, US

Patent and Priority Information (Country, Number, Date):

Patent: WO 200070522 A1 20001123 (WO 0070522)

Application: WO 2000US13528 20000516 (PCT/WO US0013528)

Priority Application: US 99313164 19990517

Designated States: CA SG

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

Publication Language: English

Filing Language: English

Fulltext Word Count: 38279

Fulltext Availability:

Detailed Description

Detailed Description

... choose from a selection of investment vehicles or more likely, a selection of investment performance **indices**. The performance of the investments selected will determine the growth of the participants' benefit liabilities...

...associated with funding the plan. For example, the participant may select the S&P 500 **Index** Fund and a **Salomon** Government **Bond** **Index** for his/her investment 0 selections, but no assets will actually be transferred into funds simulating those **indices**. The plan sponsor has the responsibility for investing the contributions made into the plan to ...

4/3,K/3 (Item 3 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
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00739246 \*\*Image available\*\*  
METHOD AND APPARATUS FOR ASSET MANAGEMENT  
PROCEDE ET APPAREIL DE GESTION D'AVOIRS

Patent Applicant/Assignee:

SELIGMAN ADVISORS INC, 100 Park Avenue, New York, NY 10017, US, US  
(Residence), US (Nationality)

Inventor(s):

HODGDON Stephen J, 35 West Brother Drive, Greenwich, CT 06830, US

KADLEC Charles W, 8 Woodcroft Road, Summit, NJ 07901, US

Legal Representative:

PEZZANO Tony V, Morgan & Finnegan, L.L.P., 345 Park Avenue, New York, NY 10154, US

Patent and Priority Information (Country, Number, Date):

Patent: WO 200052612 A1 20000908 (WO 0052612)

Application: WO 99US9296 19990428 (PCT/WO US9909296)

Priority Application: US 99259770 19990301

Designated States: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE

ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT  
LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT  
UA UG UZ VN YU ZA ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG

(AP) GH GM KE LS MW SD SL SZ UG ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English

Fulltext Word Count: 15157

Fulltext Availability:

Detailed Description

Detailed Description

... World

Indices/Standard & Poor's

(FTAWI/S&P) World ex. U.S.

Medium-Small Cap **Index** ; 1970

1985: Estimated as the difference

between the MSCI EAFE **Index**

and the S&P 500, added to the

lbbotson Small Stock **Index** ; 1950

1969: Estimated as the lbbotson

Small Stock **Index**

International Large-Company Stocks: 1970-1997: Morgan Stanley Capital

International

(MCSI) Europe Australia and Far East

(EAFE) **Index** ;

1950-1969: Estimated as the Standard & Poor's

500 Composite Stock Price **Index**

US Corporate **Bonds** : Salomon Brothers Long-Term High Grade Corporate

**Bond Index** US Government **Bonds** : 1950-1997: lbbotson "One **Bond** "

Portfolio. To the greatest extent

possible, each year, a one- **bond** portfolio with a term

of approximately 20 years and a reasonably current

coupon, and whose...

?

Set	Items	Description
S1	5	AU=(KLAFFKY, T? OR KLAFFKY T? OR HAMAKIOTES C? OR HAMAKIOT-ES, C?)
S2	3539379	INDEX? OR BOND? ? OR SALOMON
S3	3	S1 AND S2

?show file

File 9:Business & Industry(R) Jul/1994-2002/Nov 15  
(c) 2002 Resp. DB Svcs.

File 15:ABI/Inform(R) 1971-2002/Nov 16  
(c) 2002 ProQuest Info&Learning

File 16:Gale Group PROMT(R) 1990-2002/Nov 18  
(c) 2002 The Gale Group

File 148:Gale Group Trade & Industry DB 1976-2002/Nov 18  
(c)2002 The Gale Group

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File 621:Gale Group New Prod.Annou.(R) 1985-2002/Nov 14  
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File 636:Gale Group Newsletter DB(TM) 1987-2002/Nov 18  
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File 20:Dialog Global Reporter 1997-2002/Nov 18  
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File 476:Financial Times Fulltext 1982-2002/Nov 18  
(c) 2002 Financial Times Ltd

File 610:Business Wire 1999-2002/Nov 15  
(c) 2002 Business Wire.

File 613:PR Newswire 1999-2002/Nov 18  
(c) 2002 PR Newswire Association Inc

File 624:McGraw-Hill Publications 1985-2002/Nov 01  
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File 634:San Jose Mercury Jun 1985-2002/Nov 15  
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File 810:Business Wire 1986-1999/Feb 28  
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File 813:PR Newswire 1987-1999/Apr 30  
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File 625:American Banker Publications 1981-2002/Nov 15  
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File 268:Banking Info Source 1981-2002/Nov W2  
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File 626:Bond Buyer Full Text 1981-2002/Nov 15  
(c) 2002 Bond Buyer

File 267:Finance & Banking Newsletters 2002/Nov 11  
(c) 2002 The Dialog Corp.

3/9/1 (Item 1 from file: 15)  
DIALOG(R)File 15:ABI/Inform(R)  
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00222965 84-01526

**Dedication: Making the Perfect Match**

Leibowitz, Martin L.; Klaffky, Thomas E. ; Mandel, Steven; Weinberger, Alfred

Pensions & Investment Age v11n24 PP: 30 Nov 28, 1983 ISSN: 0273-5466

JRNL CODE: PNI

DOC TYPE: Journal article LANGUAGE: English LENGTH: 1 Pages

SPECIAL FEATURE: Graph

ABSTRACT: In recent years, the applications of various forms of cash matching or dedicated portfolios have grown to become important in meeting payout schedules and lowering the reserves set aside for them. Great savings may also be realized when market interest rates are materially higher than the pro forma or actuarial discount rate used to value the liabilities. Immunization - whereby a portfolio is designed to immunize a liabilities schedule across a certain range of interest rate movements - has been used to solve the same problem. Horizon matching is a blend of the best of cash matching and immunization. With this technique, the liability stream is divided into 2 parts. The first gives full cash matching of the liabilities occurring up to and including the specified horizon date. Beyond this date, duration matching based on the immunization principle is applied. While the concept is basically simple, the key to effective implementation of horizon matching is the construction of an integrated portfolio that meets numerous special and complex mathematical conditions.

DESCRIPTORS: Techniques; Portfolio management; Immunization; Cash; Bond portfolios

CLASSIFICATION CODES: 3400 (CN=Investment analysis)

3/9/2 (Item 1 from file: 148)  
DIALOG(R)File 148:Gale Group Trade & Industry DB  
(c)2002 The Gale Group. All rts. reserv.

01697759 SUPPLIER NUMBER: 02645792

**Asset-liability management using clipped securities.**

Klaffky, Thomas E.

American Banker, v148, p18(2)

Feb 23, 1983

ISSN: 0002-7561 LANGUAGE: ENGLISH RECORD TYPE: CITATION

CAPTIONS: Sample liability schedule. (graph); Sample liability schedule matched with conventional bond portfolio. (graph); Sample liability schedule matched with "stripped" securities. (graph)

SPECIAL FEATURES: illustration; graph

INDUSTRY CODES/NAMES: BANK Banking, Finance and Accounting

DESCRIPTORS: cash management--Analysis; Finance--Planning; Securities--Management

SIC CODES: 6000 DEPOSITORY INSTITUTIONS

FILE SEGMENT: TI File 148

3/9/3 (Item 1 from file: 268)  
DIALOG(R)File 268:Banking Info Source  
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00220314

**Asset/liability management using clipped securities**

Klaffky, Thomas E.

American Banker, p18, 28, Feb 23, 1983

JOURNAL CODE: AB LANGUAGE: English RECORD TYPE: Abstract

ARTICLE REFERENCE NUMBER:

ABSTRACT: Stripped securities are a new innovation for the portfolio

manager in dealing with asset/liability management. They are free from "reinvestment risk, call risk, and quality risk" and offer maturities of up to 25 years. While the conventional bond portfolio matches liabilities with bond inflows consisting of coupon and principal, management with zero-coupon bonds may be just as efficient and less costly in the current interest rate environment. In management of active-lives and product liability, zero-coupon bonds eliminate reinvestment risk without ongoing portfolio management.

DESCRIPTORS: Bonds ; Asset Liability Management; Investments

?t 3/7/all

Set	Items	Description
S1	5	SALOMON
S2	563	BRADY
S3	147374	INDEX
S4	3	S2 AND S3

?show files

File 347:JAPIO Oct 1976-2002/Jul (Updated 021104)

(c) 2002 JPO & JAPIO

File 350:Derwent WPIX 1963-2002/UD,UM &UP=200273

(c) 2002 Thomson Derwent

4/5/1 (Item 1 from file: 350)  
DIALOG(R) File 350:Derwent WPIX  
(c) 2002 Thomson Derwent. All rts. reserv.

014213556

WPI Acc No: 2002-034254/200204

XRAM Acc No: C02-009534

XRPX Acc No: N02-026399

Diagnosing Alzheimer's disease by comparing first, second raw percentage of cells responding to first, second compounds respectively, to provide ratio index which is compared to predetermined discriminating value

Patent Assignee: NEUROLOGIC INC. (NEUR-N)

Inventor: ALKON D L; BANK B; BHAGAVAN S; ETCHEBERRIGARAY R

Number of Countries: 094 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200177686	A2	20011018	WO 2001US11060	A	20010405	200204 B
AU 200155234	A	20011023	AU 200155234	A	20010405	200213

Priority Applications (No Type Date): US 2000194626 P 20000405

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200177686 A2 E 40 G01N-033/68

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

AU 200155234 A G01N-033/68 Based on patent WO 200177686

Abstract (Basic): WO 200177686 A2

NOVELTY - Diagnosing Alzheimer's disease (AD) in patient using integrated scoring system by challenging first, second set of cells of patients with first, second compound to elicit first, second response (FSR), respectively, measuring FSR and calculating first, second raw percent of responding cells; calculating ratio index (RI), determining presence/absence of AD when RI is greater or less than a predetermined value.

DETAILED DESCRIPTION - Diagnosing (M1) the presence or absence of AD in a patient comprising an integrated scoring system involves determining a first value comprising challenging one set of cells from a patient with a first compound to elicit a first response, measuring the first response and calculating a first raw percent of responding cells; determining a second value comprising challenging another set of cells from same patient with a second compound to elicit a second response, measuring the response and calculating a second raw percent of responding cells, one of the first and second responses being increased and the other decreased in AD cells as compared to non-AD cells; calculating the RI by dividing the increased response value by the decreased response value; determining the presence of AD when the RI value is below a predetermined value X; and determining the absence of AD when the RI value is equal to X or higher.

An INDEPENDENT CLAIM is also included for a computer software program for performing (M2) the diagnosis of AD by:

(a) obtaining data comprising first raw percentage of cells of the individual having functional potassium channels, and second raw percentage of cells of the individual responding when contacted by second modulator of intracellular calcium release;

(b) calculating RI by either

(i) dividing first raw percentage by the second raw percentage to provide a RI; or

(ii) dividing the second raw percentage;

(c) comparing the RI to a predetermined discriminating value and for calculation,

(i) scoring the individual as AD negative if the RI exceeds the discriminating value, and as AD positive if the RI does not exceed the discriminating value, or for calculation; and

(ii) scoring the individual as AD positive if the RI exceeds the

discriminating value, and as AD negative if the RI does not exceed the discriminating value.

USE - Diagnosing the presence or absence of AD in a patient using an integrated scoring system (claimed).

ADVANTAGE - The method enables diagnosis of individuals as AD positive even when they lack clinical manifestations of AD. The method also identifies the presence of AD in cells from a pre-symptomatic individual. The negative AD diagnosis is not affected by the presence of non-Alzheimer's neurodegenerative conditions. The scoring has sensitivity, specificity and positive predictive value sufficient to provide clinical utility for a particular given population. The method provides greater than 75% (preferably, 95%) sensitivity, specificity, and/or positive predictive value for particular population. The diagnosis detects molecular alterations associated with AD prior to the onset of clinical cognitive or plaque formation symptoms (claimed). The method rapidly and clearly distinguishes between AD patients, normal aged people, and people suffering from other non-Alzheimer's disease neurodegenerative diseases, such as Parkinson's, Huntington's chorea, Wernicke-Korsakoff or schizophrenia. The method provides a simple single-value diagnostic evaluation for AD. The method avoids the need to normalize results for separate assays of calcium signaling, permitting use of raw data, which is advantageous in the clinical setting. The methods for diagnosing AD greatly improve the present clinical diagnostic process for AD. The RI is advantageous because it provides a more generally applicable tests, utilizes raw data as opposed to manipulated data, and it provides a more accurate, precise and consistent diagnosis and predictability of AD.

pp; 40 DwgNo 0/8

Title Terms: DIAGNOSE; DISEASE; COMPARE; FIRST; SECOND; RAW; PERCENTAGE; CELL; RESPOND; FIRST; SECOND; COMPOUND; RESPECTIVE; RATIO; INDEX ; COMPARE; PREDETERMINED; DISCRIMINATE; VALUE

Derwent Class: B04; D16; S03; T01

International Patent Class (Main): G01N-033/68

International Patent Class (Additional): G01N-033/566; G06F-019/00

File Segment: CPI; EPI

4/5/2 (Item 2 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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013912747

WPI Acc No: 2001-396960/200142

XRAM Acc No: C01-120693

**Reducing airway hyperresponsiveness or airflow limitation associated with respiratory disease by administering TGF beta-regulating agent**

Patent Assignee: NAT JEWISH MEDICAL & RES CENT (NAJE-N)

Inventor: IRVIN C G

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 6248723	B1	20010619	US 9763605	A	19970610	200142 B
			US 9895877	A	19980610	

Priority Applications (No Type Date): US 9763605 P 19970610; US 9895877 A 19980610

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 6248723	B1	30	A61K-048/00	Provisional application US 9763605

Abstract (Basic): US 6248723 B1

NOVELTY - Reducing airway hyperresponsiveness associated with a respiratory disease involving an inflammatory response, comprises administering to the lungs a TGFbeta-regulating agent selected from:

(a) an isolated TGFbeta1 protein;

(b) an isolated nucleic acid molecule encoding a TGFbeta1 protein;

or

(c) a TGFbeta1 receptor-specific antibody that stimulates the activity of the receptor.



DETAILED DESCRIPTION - Reducing airway hyperresponsiveness and/or airflow limitation associated with a respiratory disease involving an inflammatory response comprises administering to the lungs a formulation comprising a TGFbeta-regulating agent selected from;

- (a) an isolated TGFbeta1 protein;
- (b) an isolated nucleic acid molecule encoding a TGFbeta1 protein, the nucleic acid molecule being operatively linked to a transcription control sequence; or
- (c) a TGFbeta1 receptor-specific antibody that stimulates the activity of the receptor.

INDEPENDENT CLAIMS are also included for the following:

- (1) prescribing treatment for airway hyperresponsiveness and/or airflow limitation associated with a respiratory disease involving an inflammatory response comprising (1) administering an agent (a)-(c) as above;
- (2) measuring the change in lung function in response to a provoking agent to determine if the TGFbeta3-regulating agent modulates airway hypersensitiveness;
- (3) prescribing a therapy comprising administration of TGFbeta based on changes in lung function; and
- (4) a formulation for protecting a mammal from airway hyperresponsiveness and/or airflow limitation associated with a respiratory disease involving an inflammation comprising (1) an antiinflammatory agent for reducing eosinophilic inflammation; and (2) a TGFbeta-regulating agent as in (a)-(c) above.

ACTIVITY - Respiratory-Gen.; antiinflammatory; antiasthmatic; antiallergic; fungicide.

Mice were immunized and then challenged with 8 days of aerosol ovalbumin. Treatment with pan-specific antibody to TGFbeta during the first focused days of antigen exposure blocked the alterations in responsiveness to antigen even 30 days after treatment (i.e. chronic effects).

MECHANISM OF ACTION - TGF-Antagonist-Beta.

USE - As TGFbeta-regulating agents for reducing airway hyperresponsiveness and/or airflow limitation associated with a respiratory disease involving an inflammatory response, for decreasing methacholine responsiveness, airways fibroproliferation or lung inflammation useful for treating and preventing asthma, allergic bronchopulmonary aspergillosis, hypersensitivity pneumonia, eosinophilic pneumonia, allergic bronchitis bronchiectasis, hypersensitivity pneumonitis, occupational asthma, reactive airway disease syndrome, hypereosinophilic syndrome, rhinitis, sinusitis and parasitic lung disease.

pp; 30 DwgNo 0/11

Title Terms: REDUCE; AIRWAY; AIRFLOW; LIMIT; ASSOCIATE; RESPIRATION; DISEASE; ADMINISTER; BETA; REGULATE; AGENT

Derwent Class: B04; D16

International Patent Class (Main): A61K-048/00

International Patent Class (Additional): A61K-038/00; A61K-039/395;

C07K-014/00; C12N-015/11

File Segment: CPI

4/5/3 (Item 3 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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013400164 \*\*Image available\*\*

WPI Acc No: 2000-572102/200053

XRAM Acc No: C00-170577

Identifying genes used for identifying drugs for the prevention and/or therapy of diabetic nephropathy involves culturing mesangial cells in the presence of glucose which induces differential expression of susceptible genes

Patent Assignee: HIBERGEN LTD (HIBE-N); UNIV COLLEGE DUBLIN (UYDU-N)

Inventor: BRADY H R; GODSON C M; MARTIN F M; MCMAHON R A; MURPHY M A

Number of Countries: 091 Number of Patents: 005

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
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WO 200050637	A1	20000831	WO 2000IE26	A	20000228	200053	B
AU 200029364	A	20000914	AU 200029364	A	20000228	200063	
EP 1157130	A1	20011128	EP 2000907904	A	20000228	200201	
			WO 2000IE26	A	20000228		
NO 200103873	A	20011024	WO 2000IE26	A	20000228	200201	
			NO 20013873	A	20010808		
CN 1343259	A	20020403	CN 2000804256	A	20000228	200247	

Priority Applications (No Type Date): IE 99157 A 19990226

# Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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WO 200050637	A1	E	86	C12Q-001/68	
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Designated States (National): AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW

AU 200029364	A		C12Q-001/68	Based on patent	WO 200050637
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EP 1157130	A1	E	C12Q-001/68	Based on patent	WO 200050637
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Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI

NO 200103873	A		C12Q-000/00		
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CN 1343259	A		C12Q-001/68		
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## Abstract (Basic): WO 200050637 A1

NOVELTY - Identifying a gene (I) having a role in the presentation of diabetic nephropathy (DN) involves culturing mesangial cells in a medium in the presence of a glucose to induce differential expression of a gene and identifying the gene induced.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) use of (I) as a diagnostic marker for the progression and presentation of DN;

(2) use of (I) as an **index** of disease activity and the rate of progression of DN;

(3) use of (I) as a basis for identifying drugs for use in the prevention and/or therapy of DN; and

(4) a gene containing a sequence of 598, 761, 393, 273 or 309 nucleotides, given in the specification.

USE - The gene identified by the novel method is useful as a diagnostic marker for the progression and presentation of DN, as an **index** of disease activity and the rate of progression of DN, and as a basis for identifying drugs for use in the prevention and/or therapy of DN (claimed). The gene identified represents novel therapeutic targets for drug development. It is useful as a clinical **index** of progressive renal sclerosis and scarring, as a guide to the response of progressive diabetic nephropathy to therapy and also as a marker of diabetes prevention or development. It is also useful to generate mouse knock-out (k/o) models for genes identified and to determine if onset of diabetic nephropathy is inhibited, reduced or delayed.

DESCRIPTION OF DRAWING(S) - The figure shows the relative amount of connective tissue growth factor mRNA as estimated by Phosphor Imager (RTM) quantification.

pp; 86 DwgNo 2/24

Title Terms: IDENTIFY; GENE; IDENTIFY; DRUG; PREVENT; THERAPEUTIC; DIABETES ; NEPHROPATHY; CULTURE; CELL; PRESENCE; GLUCOSE; INDUCE; DIFFERENTIAL; EXPRESS; SUSCEPTIBILITY; GENE

Derwent Class: B04; D16

International Patent Class (Main): C12Q-000/00; C12Q-001/68

File Segment: CPI

1/5/1 (Item 1 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
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013656288 \*\*Image available\*\*  
WPI Acc No: 2001-140500/200115  
XRPX Acc No: N01-102500

Method of processing data stream made up of plurality of cells has memory  
block temporarily allocated from number of available memory blocks to  
input by memory controller

Patent Assignee: NDS LTD (NDSN-N); TANDBERG TELEVISION ASA (TAND-N)

Inventor: CARTWRIGHT C

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
GB 2351210	A	20001220	GB 999893	A	19990430	200115 B

Priority Applications (No Type Date): GB 999893 A 19990430

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
GB 2351210	A		16	H03M-013/27	

Abstract (Basic): GB 2351210 A

NOVELTY - A memory block (63) is temporarily allocated from a  
number of available memory blocks (63) to an input by a memory  
controller (61). Data from each input is written into a respective  
allocated memory block. Data is written from a full memory block to  
reproduce one of the number of inputs.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for:

(a) an apparatus for processing a data stream made up of several  
cells

USE - In a digital broadcasting for reception of multiple digital  
transport streams.

ADVANTAGE - Provides a system for de-interleaving multiple  
transport streams in an efficient manner.

DESCRIPTION OF DRAWING(S) - The drawing shows an embodiment of the  
present invention.

Reed- Salomon decoder (46)

memory controller (61)

memory blocks (63)

pp; 16 DwgNo 5/6

Title Terms: METHOD; PROCESS; DATA; STREAM; MADE; UP; PLURAL; CELL; MEMORY;  
BLOCK; TEMPORARY; ALLOCATE; NUMBER; AVAILABLE; MEMORY; BLOCK; INPUT;  
MEMORY; CONTROL

Derwent Class: U21; W01

International Patent Class (Main): H03M-013/27

International Patent Class (Additional): H04L-012/56

File Segment: EPI

1/5/2 (Item 2 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
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010221750 \*\*Image available\*\*  
WPI Acc No: 1995-123005/199516  
XRPX Acc No: N95-097263

Concentrated coded vestigial sideband modulation for HDTV - uses Reed-  
Salomon coder followed by trellis coder using N- dimensional trellis  
coder where N is larger than one

Patent Assignee: AMERICAN TELEPHONE & TELEGRAPH CO (AMTT ); AT & T CORP  
(AMTT )

Inventor: WEI L

Number of Countries: 008 Number of Patents: 006

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5398073	A	19950314	US 94226606	A	19940412	199516 B
EP 677966	A2	19951018	EP 95302241	A	19950404	199546
JP 7298222	A	19951110	JP 9586692	A	19950412	199603

CA 2144794	A	19951013	CA 2144794	A	19950316	199607
SG 24119	A1	19960210	SG 95223	A	19950406	199632
CA 2144794	C	19990615	CA 2144794	A	19950316	199942

Priority Applications (No Type Date): US 94226606 A 19940412

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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US 5398073	A		15	H04N-007/04	
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EP 677966	A2	E	16	H04N-007/24	
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Designated States (Regional): DE FR GB NL

JP 7298222	A		13	H04N-007/015	
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CA 2144794	C	E		H04N-007/26	
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CA 2144794	A			H04N-007/26	
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SG 24119	A1			H04N-007/04	
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Abstract (Basic): US 5398073 A

The method includes steps of Reed-Solomon encoding a digital signal, then generating a sequence of N-dimensional symbols as a function of the Reed-Solomon-encoded signal using an N-dimensional trellis code. N larger than 1, represents each of the symbols as a sequence of N one-dimensional signal points of a one-dimensional M-ary transmitter constellation.

The method also entails generating a vestigial sideband modulation signal which represents the resulting sequence of signal point representations, and applying the vestigial sideband modulation signal to the television channel. The television channel is a cable channel and wherein M=16.

USE/ADVANTAGE - For standardisation of HDTV. Improved performance.

Dwg.1/13

Title Terms: CONCENTRATE; CODE; VESTIGIAL; SIDEBAND; MODULATE; HDTV; REED;

CODE; FOLLOW; TRELLIS; CODE; N; DIMENSION; TRELLIS; CODE; N; LARGER; ONE

Derwent Class: W02

International Patent Class (Main): H04N-007/015; H04N-007/04; H04N-007/24;

H04N-007/26

International Patent Class (Additional): H03M-007/14; H03M-013/12;

H04B-001/68; H04L-027/02

File Segment: EPI

1/5/3 (Item 3 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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008030098 \*\*Image available\*\*

WPI Acc No: 1989-295210/198941

XRPX Acc No: N89-225110

**Communication system with concatenated coding error correction - has differential decoder, Reed-solomon stage, viterbi decoder and parallel to series converter**

Patent Assignee: MITSUBISHI DENKI KK (MITQ )

Inventor: KOJIMA T; MIYAKE M

Number of Countries: 004 Number of Patents: 006

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
GB 2216753	A	19891011	GB 894936	A	19890303	198941 B
JP 1225227	A	19890908	JP 8851167	A	19880303	198942
FR 2628587	A	19890915				198944
JP 2053330	A	19900222	JP 88205551	A	19880818	199014
US 5117427	A	19920526	US 89318152	A	19890302	199224
GB 2216753	B	19921104	GB 894936	A	19890303	199245

Priority Applications (No Type Date): JP 88205551 A 19880818; JP 8851167 A 19880303

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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GB 2216753	A		47		
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US 5117427	A		22	G06F-011/10	
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GB 2216753	B			H03M-013/00	
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Abstract (Basic): GB 2216753 A

Differential coding and decoding are performed in a coder (4) and a differential decoder. The 2-channel output (9) obtained by a convolutional coding procedure is parallel-to-serial converted and then subjected to synonym or framing information insertion before being transmitted using binary phase shift keying. A reed- salomon (RS) stage is provided (2).

On the receiving side, the received data is supplied after detection and removal of synonym or framing to Viterbi decoder and thence to the decoder followed by RS decoding.

ADVANTAGE - Minimises power requirements.

1/17

Title Terms: COMMUNICATE; SYSTEM; CONCATENATED; CODE; ERROR; CORRECT;

DIFFERENTIAL; DECODE; REED; STAGE; DECODE; PARALLEL; SERIES

Derwent Class: U21; W01

International Patent Class (Main): G06F-011/10

International Patent Class (Additional): H03M-013/12; H03M-013/22;

H04B-007/00; H04B-014/06; H04L-001/00; H04L-007/00; H04L-027/18

File Segment: EPI

1/5/4 (Item 4 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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007091849

WPI Acc No: 1987-091846/198713

XRPX Acc No: N87-068697

Combined correction code decoder - has corresp. inputs of error presence  
signaliser connected to single error subscriber commutator

Patent Assignee: ANOKHIN A V (ANOK-I)

Inventor: ANOKHIOH A V; BOYARINOV I M; DAVYDOV A A

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
SU 1229969	A	19860507	SU 3589594	A	19830504	198713 B

Priority Applications (No Type Date): SU 3589594 A 19830504

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
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SU 1229969	A	15		
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Abstract (Basic): SU 1229969 A

For faster decoding the device now includes single error locator communicator (6) first error presence signalling unit (7), Reed-Salomon code error (RSCE) commutation unit (8) parity check errors calculator (9) decoders (10-12) (RSCE) commutator (13), shifted bits corrector (14), shifted bits error value shaper (15) and first internal data bits former (16).

The calculator (9) calculates the parity check errors simultaneously with the (RSCE) calculator (5) and the (RSCE) commutation unit (8). Third and second decoders (12,11) decode four bits values forming 16 bits words. The first decoder (10) forms 8 bits word corresp. data orders of NR code.

USE - In computer engineering and communication for correction detection of errors in 64-bit data blocks. Bul. 17/7.5.86 (15pp)

Dwg.No.1/5

Title Terms: COMBINATION; CORRECT; CODE; DECODE; CORRESPOND; INPUT; ERROR; PRESENCE; CONNECT; SINGLE; ERROR; SUBSCRIBER; COMMUTATE

Derwent Class: U21

International Patent Class (Additional): H03M-013/02

File Segment: EPI

1/5/5 (Item 5 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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004556933

WPI Acc No: 1986-060277/198609

XRFX Acc No: N86-043923

Integrated navigation system for land, sea and air traffic - combines functions of identification, navigation, traffic control, anti-collision and communications equipment

Patent Assignee: THOMSON CSF (CSFC )

Inventor: MILOSEVIC L

Number of Countries: 006 Number of Patents: 007

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
NL 8104417	A	19860203	NL 814417	A	19810925	198609 B
GB 2164822	A	19860326	GB 8128609	A	19810922	198613
FR 2571151	A	19860404				198620
DE 3138318	A	19860626	DE 3138318	A	19810925	198627
GB 2164822	B	19860820				198634
BE 890478	A	19860918	BE 890478	A	19860918	198640
IT 1144867	B	19861029				198833

Priority Applications (No Type Date): FR 8020713 A 19800926

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

NL 8104417 A 24

Abstract (Basic): NL 8104417 A

The message used in the system has three main parts: a preliminary word (1) followed by a fine synchronisation signal (3) and the multi-word message signal (2). The preliminary word (1) consists of modulated pulses with very wide frequency bandwidths, spread over a broad spectrum. The preliminary word has coarse synchronisation.

The text pulses which follow the fine synchronisation signal (3) are also spread over a wide spectrum, but are differently modulated and have narrow bandwidths. The text is formed from a preface word in 16/7 Reed Salomon code, while the message words are in 31/15 code.

ADVANTAGE - Requires less receivers than previous systems of its type and is unaffected by low level selective interference

Title Terms: INTEGRATE; NAVIGATION; SYSTEM; LAND; SEA; AIR; TRAFFIC; COMBINATION; FUNCTION; IDENTIFY; NAVIGATION; TRAFFIC; CONTROL; ANTI; COLLIDE; COMMUNICATE; EQUIPMENT

Derwent Class: W01; W02; W06

International Patent Class (Additional): G01S-013/76; G08G-000/00;

H04B-014/02; H04J-013/00; H04K-001/10; H04K-003/00; H04L-009/00

File Segment: EPI

Set	Items	Description
S1	4	AU=(KLAFFKY, T? OR KLAFFKY T? OR HAMAKIOTES C? OR HAMAKIOTES, C?)

?show files

File 2:INSPEC 1969-2002/Nov W3  
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File 35:Dissertation Abs Online 1861-2002/Oct  
(c) 2002 ProQuest Info&Learning

File 65:Inside Conferences 1993-2002/Nov W2  
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File 99:Wilson Appl. Sci & Tech Abs 1983-2002/Oct  
(c) 2002 The HW Wilson Co.

File 233:Internet & Personal Comp. Abs. 1981-2002/Oct  
(c) 2002 Info. Today Inc.

File 474:New York Times Abs 1969-2002/Nov 16  
(c) 2002 The New York Times

File 475:Wall Street Journal Abs 1973-2002/Nov 15  
(c) 2002 The New York Times

File 583:Gale Group Globalbase(TM) 1986-2002/Nov 16  
(c) 2002 The Gale Group

File 139:EconLit 1969-2002/Nov  
(c) 2002 American Economic Association

1/5/1 (Item 1 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2002 Institution of Electrical Engineers. All rts. reserv.

03595585 INSPEC Abstract Number: A90053612

Title: Periodic flows through curved tubes: the effect of the frequency parameter

Author(s): Hamakiotes, C.C. ; Berger, S.A.

Author Affiliation: Dept. of Mech. Eng., California Univ., Berkeley, CA, USA

Journal: Journal of Fluid Mechanics vol.210 p.353-70

Publication Date: Jan. 1990 Country of Publication: UK

CODEN: JFLSA7 ISSN: 0022-1120

Language: English Document Type: Journal Paper (JP)

Treatment: Theoretical (T)

Abstract: The authors consider a sinusoidally varying volumetric flow rate in a curved pipe of arbitrary curvature ratio,  $\delta$ , and investigate the effect of frequency parameter  $\alpha$ , and Reynolds number  $Re$  on the flow. Specifically, they report on the flow-field development for the range  $7.5 \leq \alpha \leq 25$ , and  $50 \leq Re \leq 450$ . The results, obtained by numerical integration of the full Navier-Stokes equations, reveal a number of characteristics of the flow previously unreported. (30 Refs)

Subfile: A

Descriptors: integration; Navier-Stokes equations; numerical analysis; pipe flow

Identifiers: curved tubes; frequency parameter; volumetric flow rate; curved pipe; Reynolds number; flow-field development; numerical integration; Navier-Stokes equations

Class Codes: A4760 (Flows in ducts, channels, and conduits); A4710 (General theory); A0260 (Numerical approximation and analysis)

1/5/2 (Item 2 from file: 2)

DIALOG(R)File 2:INSPEC

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03387259 INSPEC Abstract Number: A89070323

Title: Period tripling in periodic flows through curved pipes

Author(s): Hamakiotes, C.C. ; Berger, S.A.

Author Affiliation: Dept. of Mech. Eng., California Univ., Berkeley, CA, USA

Journal: Physical Review Letters vol.62, no.11 p.1270-3

Publication Date: 13 March 1989 Country of Publication: USA

CODEN: PRLTAO ISSN: 0031-9007

Language: English Document Type: Journal Paper (JP)

Treatment: Theoretical (T)

Abstract: The authors study numerically the laminar fully developed region of period flows through curved pipes. Under certain conditions the results exhibit period tripling. This striking feature is reminiscent of one of the possible routes to chaos that typical nonlinear dynamical systems take. (16 Refs)

Subfile: A

Descriptors: chaos; flow instability; laminar flow; numerical analysis; pipe flow; pulsatile flow

Identifiers: numerical study; periodic flows; curved pipes; laminar fully developed region; period tripling; chaos; nonlinear dynamical systems

Class Codes: A4760 (Flows in ducts, channels, and conduits); A0545 (Theory and models of chaotic systems); A0260 (Numerical approximation and analysis); A4715F (Stability of laminar flows); A4720 (Hydrodynamic stability and instability)

1/5/3 (Item 3 from file: 2)

DIALOG(R)File 2:INSPEC

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03311434 INSPEC Abstract Number: A89029427

Title: Fully developed pulsatile flow in a curved pipe



Author(s): Hamakiotes, C.C. ; Berger, S.A.  
Author Affiliation: Dept. of Mech. Eng., California Univ., Berkeley, CA,  
USA

Journal: Journal of Fluid Mechanics vol.195 p.23-56  
Publication Date: Oct. 1988 Country of Publication: UK  
CODEN: JFLSA7 ISSN: 0022-1120  
Language: English Document Type: Journal Paper (JP)  
Treatment: Theoretical (T)

Abstract: The fully developed region of periodic flows through curved pipes of circular cross-section and arbitrary curvature has been simulated numerically. The volumetric flow rate, prescribed by a cosine function, remains positive throughout the entire cycle. Such flows are characterized by three parameters: the frequency parameter  $\alpha$ , the amplitude ratio  $\gamma$  and the mean Dean number  $\kappa_m$ . The authors use the Projection Method to solve the finite-difference approximation of the Navier-Stokes equations in their primitive form. The effect of  $\kappa_m$  on the flow has been extensively studied for the range  $0.7559 \leq \kappa_m \leq 756$  for  $\alpha = 15$  and  $\gamma = 1$ , and the curvature ratio,  $\delta$ , equal to  $1/7$ . Interactions between the Stokes layer and the interior are noted and a variety of pulsatile motions along with reversal of the axial-flow direction are revealed. The manner in which the secondary motions evolve with increasing Dean number, and how they change direction from outward to inward 'centrifuging' at the centre, is also explained. Reversal in the axial flow is observed for all values of Dean number studied and occupies a region ranging from the area immediately adjacent to the entire wall for low values of Dean number to the entire inner half of the cross-section for larger values. When reversal of the axial flow is present, the local maximum axial shear stress is found at the inner bend where the backflow region is located. (41 Refs)

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Descriptors: flow simulation; Navier-Stokes equations; pipe flow; pulsatile flow; shear flow; vortices

Identifiers: pulsatile flow; curved pipe; fully developed region; periodic flows; circular cross-section; arbitrary curvature; volumetric flow rate; cosine function; frequency parameter; amplitude ratio; mean Dean number; Projection Method; finite-difference approximation; Navier-Stokes equations; Stokes layer; axial-flow direction; secondary motions; centrifuging; axial flow; shear stress; backflow region

Class Codes: A4760 (Flows in ducts, channels, and conduits); A4730 (Rotational flow and vorticity)

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**PERIODIC FLOWS THROUGH CURVED TUBES**

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We study numerically the laminar fully-developed region of periodic flows through curved tubes of arbitrary curvature. We impose a sinusoidal volumetric flow rate and seek the response of the flow field to it. The volumetric flow rate has a non-zero mean and remains positive throughout the entire cycle. Such flows are characterized by three parameters; the frequency parameter  $\alpha$ , the amplitude ratio  $\gamma$  and the Dean number  $\kappa_m$ . We use the Projection Method to solve the equations of motion in their primitive, conservative form. The effect of  $\alpha$  and  $\kappa_m$  on the flow has been studied extensively for  $\gamma = 0.98$  and for the curvature ratio  $\delta = 1/7$ . We considered the ranges 7.5

$\alpha \leq 25$  and  $37 \leq \kappa_m \leq 341$ . Some of the principal results reveal interactions between the Stokes layer and the interior of the cross section. The axial pressure gradient required to sustain the flow increases with  $\alpha$  and decreases with  $\kappa_m$ . Lyne-type motion, i.e. inward 'centrifuging', occurs at lower  $\alpha$  for higher  $\kappa_m$  and always happens during the accelerative part of the volumetric flow. Regions of reversed axial flow are observed when the flow rate approaches its minimum. Backflow extends further outwards along the wall as  $\alpha$  increases and  $\kappa_m$  decreases.

For  $\alpha = 15$  and the range  $238 \leq \kappa_m \leq 302$  the results exhibit period tripling, that is, the velocity field varies periodically with time over three cycles and then repeats itself over the next three cycles. The pressure gradient, however, varies periodically over a single cycle, like the imposed volumetric flow rate. This striking feature is reminiscent of one of the possible roads to chaos which non-linear dynamical systems take. Though the current state of theoretical understanding and our present results are incomplete as far as answering the question of the onset of chaos in fluid flow through curved tubes, our results show that unsteady fluid dynamical systems are capable of period bifurcations which should be discernible by experiments.

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